

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Simon WEST, et al.

Serial No.: 10/788,622

Filed: February 27, 2004

Art Unit: 1714

Examiner: Edward J. Cain

Atty. Docket No.: JG-PET-5175/555557.2002

Customer No.: 026418

Dated: February 21, 2007

**METHOD FOR THE  
DECONTAMINATION OF  
POLYETHYLENE TEREPHTHALATE**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313

**AMENDMENT**

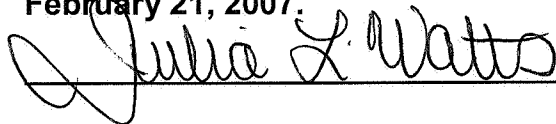
Dear Sir:

In response to the Office Action mailed August 28, 2006, please amend the above-identified application as follows:

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks** begin on page 5 of this paper.

**I hereby certify that this correspondence is being filed electronically with the United States Patent and Trademark Office, Commissioner for Patents, on February 21, 2007.**



/Julia L. Watts

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled)
2. (Previously Presented) The process of claim 20 wherein the soluble polyethylene terephthate polymers and ethanediol are recovered from the product mixture by filtration.
3. (Original) The process of claim 2 wherein the filtration is high pressure filtration.
4. (Previously Presented) The process of claim 2 wherein a material selected from the group consisting of activated carbons and mixtures of activated carbons and activated clays is added to the product mixture prior to filtration.
5. (Cancelled)
6. (Previously Presented) The process of claim 21 wherein the products are recovered from the solution by filtration.
7. (Original) The process of claim 6 wherein a material selected from the group consisting of activated carbon and mixtures of activated carbon and activated clay is added to the product mixture prior to filtration.
8. (Previously Presented) The process of claim 21 wherein the products are recovered by density separation.
9. (Cancelled)
10. (Previously Presented) The contaminant free composition obtained from the process of claim 20.
11. (Cancelled)
12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Currently Amended) A process for removing contaminants from PET without the formation of embrittled PET during the process consisting essentially of:

(a) mixing ethanediol with unembrittled PET which contains contaminants at a temperature about the boiling point of ethanediol for a time sufficient to convert the polyethylene terephthalate components to polyethylene terephthalate polymers which are soluble in the ethanediol and form bis (hydroxyethyl) terephthalate and produce a product mixture thereof with insoluble material ~~and from which no embrittled PET is recovered~~;

(b) recovering the soluble polyethylene terephthalate polymers and bis (hydroxyethyl) terephthalate and ethanediol from the mixture.

21. (Currently Amended) A process for treating a composition without the formation of embrittled PET during the process consisting essentially of unembrittled contaminated polyethylene terephthalate components to remove the contaminants therefrom comprising:

(a) reacting the unembrittled polyethylene terephthalate components with ethanediol at a temperature at or about the boiling point of ethanediol for a period of time sufficient to transesterify the polyethylene terephthalate components and form a solution containing products selected from the group consisting of soluble polyethylene terephthalate polymers, bis(hydroxy ethyl) terephthalate ester and mixtures thereof ~~without recovering embrittled therefrom~~;

(b) recovering the products from the solution; and

(c) treating the recovered product at a pressure and temperature and for a period of time sufficient to hydrolyze the recovered products and produce an ethanediol solution and crystals of terephthalic acid.

22. (Previously Presented) The process of claim 20 wherein the PET is in the form of oligomers having chain lengths of about 200 repeat units.

23. (Previously Presented) The process of claim 22 wherein the PET is converted to oligomers having about 1 to 5 repeat units.

## REMARKS

The Examiner's courtesy and cooperation in an interview on February 16, 2007 are appreciatively acknowledged. As a result of the foregoing amendment, the claims of the above-identified application have been modified in the manner discussed with the Examiner. In particular, the independent claims now recite a process wherein no embrittled PET is produced and the product-by-process claims have been cancelled.

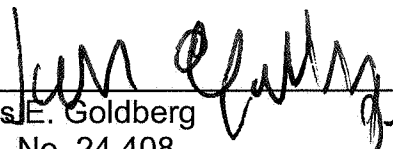
It is clear that the independent claims and claims dependent therefrom as amended are patentable over the art of record, the West '187 patent. Thus, that patent, the disclosure of that patent clearly discloses only a process wherein embrittled PET is produced during the carrying out of the process. This is a major advantage of the presently claimed process over that prior art.

In light of the Examiner's indication that the amendments would appear to overcome all rejections on record, favorable reconsideration and prompt Notice of Allowance are earnestly solicited.

Respectfully submitted,

Dated: February 21, 2007

By

  
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